

MODEL 7100

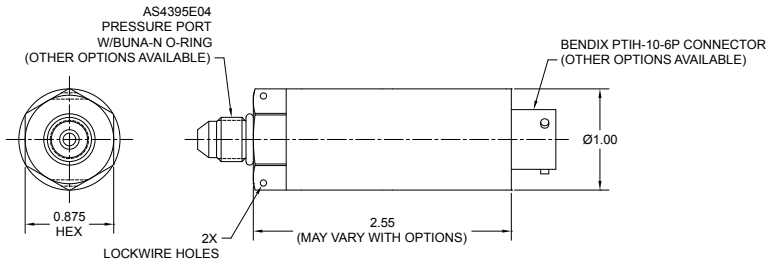
mV AEROSPACE HERITAGE PRESSURE TRANSDUCER

GP:50 Aerospace Heritage products can be designed to meet various MIL Specifications. Consult factory.



WIRING CONFIGURATION:

| PIN | DESCRIPTION |
|-----|-------------|
| A/1 | +EXC |
| B/2 | +SIG |
| C/3 | -SIG |
| D/4 | -EXC |
| E/5 | N/C |
| F/6 | N/C |



GP:50 Cage Code: ON8Y7

**REF DIMENSIONS ONLY.
CONSULT FACTORY FOR ACTUAL DIMENSIONS.**

PRODUCT OVERVIEW:

Model 7100 flight-heritage, low level pressure transducer from GP:50 is designed to provide high-accuracy measurements of up to $\pm 0.1\%$ FSO. Its flight heritage, spanning 25 years, makes it ideal for use within demanding aerospace and defense applications, including those in which higher shock and vibration levels may be present. Its compact and lightweight design facilitates ease of installation within space constrained environments.

FEATURES:

- Aircraft and space flight heritage
- Compact, lightweight stainless steel design
- High accuracies up to $\pm 0.1\%$ FSO (BFSL)
- Wide operating temperature range from $-70\text{ }^{\circ}\text{F}$ to $+275\text{ }^{\circ}\text{F}$ ($-56\text{ }^{\circ}\text{C}$ to $+135\text{ }^{\circ}\text{C}$)
- Secondary containment rated to 4,500 PSI (310 BAR)

APPLICATIONS:

- Commercial and defense satellites
- Launch vehicles
- Unmanned aerial vehicles
- Military and civilian aircraft
- Ground support and engine test stands

OPTIONS:

- "B+ and S Class" amplified electronics available
- Temperature output
- Inconel, Hastelloy, and Monel wetted parts
- Wide selection of pressure ports and electrical connections
- Various MIL-SPECS available. Consult factory.

GP:50 MODEL 7100

REFERENCE SPECIFICATIONS

Standard configurations shown, consult factory for other options

| ELECTRICAL | |
|---------------------|--|
| Output Signal: | Non-amplified 1-3 mV/V (Range dependent) (Optional 5 mV/V - 10mV/V outputs available) |
| Excitation Voltage: | 3.5 to 15 Vdc |
| Bridge Resistance: | 5K Ω standard, 350 Ω optional |
| Response Time: | 3-5 kHz typical |

| MATERIALS OF CONSTRUCTION | |
|---------------------------|--|
| Wetted Parts: | 17-4 PH or 316L pressure range dependent (Inconel, Hastelloy and Monel available) |
| Housing: | 316L Stainless Steel |
| Internal Fill: | Optional: < 1000 PSI units offer Silicone or Fomblin oil (Consult Factory) |

| ACCURACY (Hysteresis, Non-Linearity & Repeatability @ +70 °F) | |
|---|-----------------------------|
| Static Accuracy (RSS): | $\leq \pm 0.3\%$ FSO |
| Non-linearity: | $\leq \pm 0.2\%$ FSO (Typ) |
| Hysteresis: | $\leq \pm 0.15\%$ FSO (Typ) |
| Repeatability: | $\leq \pm 0.1\%$ FSO (Typ) |
| Zero Balance: | $\pm 1.0\%$ FSO |
| Span Balance: | $\pm 1.0\%$ FSO |

(BFSL method used. Improved options available.)

| | |
|-----------------|---------------------|
| Calibration: | NIST Traceable Cert |
| Workmanship: | IPC-A-610 Soldering |
| Quality System: | ISO 9001 |

Options may affect specifications.
Please consult factory for your specific needs.

| MECHANICAL | |
|------------------------|---|
| Process Connection: | AS4395E04 standard, optional pressure ports available |
| Electrical Connection: | D38999 standard, options available |
| Proof Pressure: | 1.5X FSO |
| Burst Pressure: | 3.0X FSO |
| Secondary Containment: | Rated at 4,500 PSI (310 BAR) |
| Random Vibration: | >25 G RMS (20 Hz to 2,000 Hz) (options available) |
| Pyroshock: | 100 G half-sine shock pulse over 11 msec (options available) |
| Constant Acceleration: | 5 G's for 30 minutes |
| Approximate Weight: | 4 oz (0.1 kg) some options may affect weight |

| PRESSURE RANGES | |
|---|--|
| 0-2 thru 0 to 15K PSIA, PSIG, PSIV, PSISG options (14 mBAR thru 1,034 BAR) (Ranges below 1,000 PSI require oil-filled sensor, consult factory) | |

| THERMAL SPECIFICATIONS | |
|---|---|
| Operating Range: | < 1000 PSI: -40°F to +250 °F (-40 °C to +121 °C) |
| | \geq 1000 PSI: -65°F to +275 °F (-54 °C to +135 °C) (Certain ranges can affect Operating Range) |
| Compensated Range: | 0 °F to +180 °F (-18 °C to +82 °C) |
| Compensated Ranges from -65 °F to +250 °F (-54 °C to 121 °C) available | |
| Effect on Zero & Span: | $\pm 1.0\%$ FSO/100 °F (Improved specifications available) |

